number of perforating veins to be found and treated in these "mild" classes. Were they really just branch veins?

The authors provide no information on where they accessed the SSV and how much was ablated, a point of debate in endovenous SSV treatment. The observation regarding the frequent relationship of the SSV to the intersaphenous vein, either as an extension or a direct continuation in 57% of the limbs, is a unique anatomic finding. I am curious, however, why no other incompetent veins of the popliteal fossa, such as the gastrocnemius or popliteal area veins, which are not accessible to their technique, were not detected in such a large series. These other veins of the popliteal fossa may, if incompetent, perpetuate reflux in the popliteal fossa, even if the SSV is treated properly. For example, Gillet et al[5] reported a 20% incidence of incompetent gastrocnemius veins in a series of 180 operations for SSV incompetence, a proportion similar to that described by Hobbs and Vandendriessche.[6]

The 5.7% incidence of deep venous thrombosis is troubling, particularly when compared with results with endovenous laser treatment of the great saphenous vein or open surgical series. Moreover, the incidence is actually higher in this series, when the patients with type C anatomy (no direct termination of the SSV in the popliteal vein) are eliminated. In these patients there is no chance of thermal energy from the laser tip directly damaging the popliteal vein. When the incidence of deep vein thrombosis is calculated on this basis, the incidence for at risk patients was actually 12%. This may be too high a price to pay for this less invasive approach to the SSV.

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Reply

We thank Dr O'Donnell for his comments and agree that reporting standards and current anatomic terminology are important. The paper was submitted as "Endovenous Laser Treatment of the Small Saphenous Vein: Efficacy and Complications," but the anatomic terminology was changed by the JVS proofreaders in error to "short saphenous vein." A correction has been issued by JVS.

The purpose of our series was to show that EVLT of the small saphenous vein (SSV) was feasible and to determine the rate of complications. We defined *efficacy* as duplex-proven closure of the SSV and elimination of reflux. Dr O'Donnell alludes in his comments to the reason that we did not include the Venous Clinical Severity Score as a measure of efficacy. Because fully 78% of limbs underwent concomitant EVLT of the great saphenous vein, it would be impossible to tease out what the benefit of the SSV ablation was specifically in terms of any change in the Venous Clinical Severity Score. Instead, we defined efficacy very objectively, as stated above.

Dr O'Donnell is correct in noting that only the CEAP clinical classification is noted in the article. In the article and the accompanying table, we did call this "CEAP clinical classification" and not just "CEAP classification." Dr O'Donnell is also correct in assuming that all limbs had reflux.

Because the paper had to be edited to meet the length requirements of JVS, a number of procedural details and details regarding concomitant procedures (great saphenous vein EVLT, perforator ligation, and microphlebectomy) were not outlined. In our vascular laboratory, we define reflux by valve closure time greater than 2 seconds. Mean and median valve closure times were not collected in the data for the study. SSVs were treated only if they demonstrated reflux and were causing clinical symptoms or were cosmetically bothersome varicose veins. Criteria for perforator incompetence included both reflux and diameter. Perforator veins were treated only if deemed to be either clinically or cosmetically significant: ie, if they were tributaries into clusters of varicosities that either were symptomatic or bothered the patient from a cosmetic standpoint. Although other authors have found that routine perforator ligation is unnecessary in treating patients without deep venous insufficiency in terms of improvement in APG-measured hemodynamic parameters and clinical symptom score,[1] in our practice we have had suboptimal cosmetic results when we have left perforator veins to clusters of varicosities remote from the SSV or great saphenous vein untreated.

The length of SSV treated and the access point were left to the discretion of the treating surgeon (three surgeons were involved in the study). In general, the ablation was started 1.5 to 2.0 cm from the saphenopopliteal junction (SPJ) if no intersaphenous vein was present and just distal to the intersaphenous vein if it was present. Access was obtained in some cases as low as just above the lateral malleolus. We noted no difference in the incidence of paresthesias in patients with "low" access. Incompetent popliteal fossa veins other than the intersaphenous vein were not specifically tracked, but if present and causing clusters of varicosities untreated by EVLT, they were addressed by microphlebectomy of the branches.

We agree that a 5.7% incidence of deep venous thrombosis (DVT) is high (the incidence was 11.4% for type A anatomy, 2.9% for type B anatomy, and 0% for type C anatomy); however, we believe that our definition of DVT was very conservative. Any extension of clot into the SPJ was defined as a DVT. We would now describe these clots as endovenous heat-induced thrombosis (EHIT; as described by Kabnick et al[2]). We agree with Kabnick and colleagues that EHITs do not behave like de novo DVTs. Kabnick and associates' abstract suggested that clots flush with the saphenofemoral junction or SPJ do not need anticoagulation and recommended that clots extending into the saphenofemoral junction or SPJ filling less than 50% of the diameter of the deep vein be treated with low-molecular-weight heparin until the thrombus recedes out of the deep vein. Clots filling greater than 50% of the diameter of the deep vein or occlusive clots are treated with standard DVT treatments. According to these criteria, none of the limbs in our study with "DVT" would require standard DVT treatment, as all filled less than 50% of the popliteal lumen. Since completing this study, we treat our patients with EHIT with the above algorithm, and all have uniformly showed resolution of the EHIT within a matter of days without any bleeding or thrombotic complication. We believe that EVLT of the SSV offers patients a significantly easier recovery with reduced morbidity compared with stripping of the SSV. As EHITs have had a benign course in all of our patients both during and since our study and as the incidence of nerve injury is very low, EVLT of the SSV is the procedure of choice in patients with SSV incompetence in our practice.

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Regarding "Endovenous laser treatment of the short saphenous vein: Efficacy and complications"

I enjoyed the excellent article of Gibson et al,[1] and have a question about the details of endovenous laser treatment (EVLT) with respect to the Giacomini vein termination. The recurrence rate of the small saphenous vein (SSV) is generally more than 30%.[2] The point where the Giacomini vein connects to the SSV differs among individual patients, ranging from immediately subfascial (Fig, *B*) to deep near the saphenopopliteal junction (SPJ; Fig *A*).[3] By using EVLT beginning distal to the termination of the Giacomini vein, in order to preserve flow from the Giacomini vein to the SSV in type B patients, a long SSV stump is left, which might cause treatment failure and recurrence. Do the authors always start EVLT from distal to the termination of the Giacomini vein when treating type B patients? How do they perform EVLT in patients with reflux in both the SSV trunk and Giacomini vein?

We prefer to start EVLT from 1 cm to 1.5 cm distal to the SPJ to avoid leaving a long residual SSV stump. Therefore, for almost all patients, we conduct EVLT proximal to the site where the Giacomini vein is drained. Contrary to the variability of the Giacomini vein termination, in case of the gastrocnemius vein terminating at the SSV, it terminated almost always just distal of the SPJ. Thus, we start EVLT from 1 to 1.5 cm distal to the site where the gastrocnemius vein terminated into the SSV to maintain the normal venous flow of the gastrocnemius vein.

Our clinical experience with more than 4600 limbs (including 1086 SSVs) treated with EVLT spans 5 years, with all patients undergoing post-EVLT duplex scans at multiple time periods. Our routine follow-up duplex scan schedule is 2 days, 1 week, 1 month, 3 months, 6 months, thereafter annually. Surprisingly, we have never seen a deep vein thrombosis in any of our patients.

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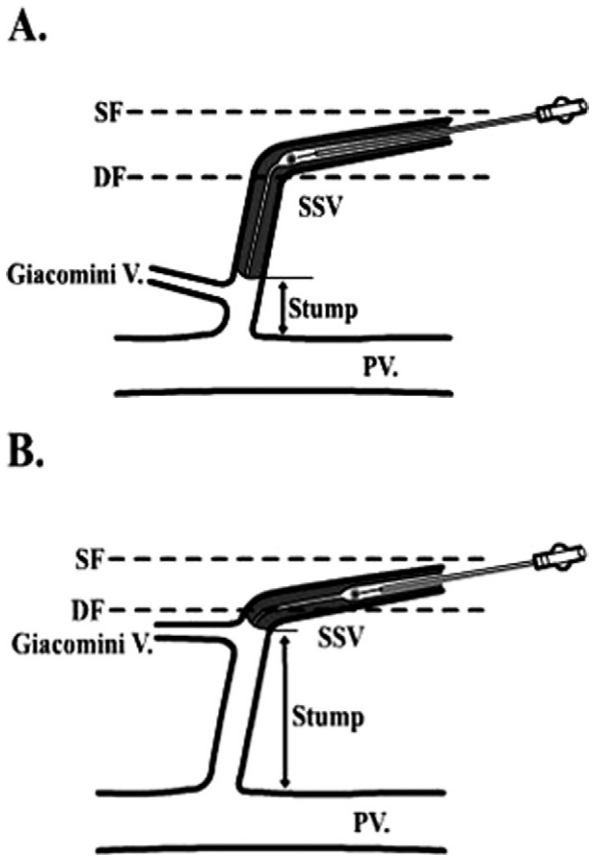

Endovenous laser therapy of small saphenous vein *(SSV)*. **A,** The Giacomini vein connects to the SSV near saphenopopliteal junction. **B,** The Giacomini vein connects to the SSV at immediate subfascial level, leaving a long stump. *PV,* Popliteal vein; *SF,* superficial fascia; *DF,* deep fascia.

Regarding "Duplex surveillance following carotid surgery: effect of management policy"

I refer to the study by Ballotta and colleagues, which described the outcome of 599 patients following carotid endarterectomy.[1] The authors report excellent perioperative results and also examine the outcome of follow-up duplex surveillance. The authors conclude that their findings strongly support the value of duplex surveillance every 6 months after carotid surgery. The interpretation of this study needs to take into account controversies regarding managing asymptomatic carotid artery disease.[2,3] An imaging finding is primarily of value if it alters the clinical management of the patient. The potential findings from surveillance after carotid surgery include ipsilateral restenosis or contralateral progression of stenosis. While this and other studies indicate that both these problems can be easily and commonly identified by duplex surveillance, the management of them remains controversial.[4] Ipsilateral restenosis particularly, if developing within the first year following surgery, is believed to have a benign natural history and, therefore, many clinicians treat such lesions medically.[4] Similarly, the management of asymptomatic carotid stenosis also remains controversial with meta-analyses suggesting significant but small reduction in stroke incidence based on interventional treatment of all patients with asymptomatic carotid stenosis.[2,3] Only two of the patients in the present study suffered a stroke associated with progression of